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[Continued on next page]

(54) Title: **RHESUS HER2/NEU, NUCLEOTIDES ENCODING SAME, AND USES THEREOF**

Predicted Amino Acid Sequence of First Rhesus
Her2/Neu Protein (SEQ ID NO:2)

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1  MELAAWYRWG  LLLALLPPGA  AGTQVCTGTD  MKLRLPASPE  THLDMLRHLY  QGCQVVOGNI
61  ELTYLPTNAS  LSFLQDIQEV  QGYVLIHNP  VRQVPLQRLR  IVRGTLQFED  NYALAVLDNG
121  DLLNNTTPVT  GASPGGLREL  QLRSLTEILK  GGVLIQRNPQ  LCYQDTILWK  DIFHKNNQLA
181  LTLIDTNRSR  ACHPCSPVCK  GSRCWGESSE  DCQSLTRTVC  AGGCARCKGP  LPTDCCHEQC
241  AAGCTGPKHS  DCLACLHFNH  SGICELHCPA  LVTYNTDTFE  SMPNPEGRYT  FGASCVTACP
301  YNYLSTDVGS  CTLVCPHNP  EVTAEDGTQR  CEKCSKPCAR  VCYGLGMEHL  REVRAVTSAN
361  IQEFAGCKKI  FGSLAFLPES  FDGDPASNTA  PLQPEQLRVF  ETLEEITGYL  YISAWPDSL
421  DLSVLQNLQV  IRGRILHNGA  YSLTLQGLGI  SWLGLRLSRE  LGSGLALIH  NTRLCFVHTV
481  PWDQLFRNPH  QALLHTANRP  EDECVGEGLA  CHQLCARGHC  WPGPTQCVN  CSQFLRGQEC
541  VEECRVLQGL  PREYVNRHC  LPCHPECQPO  NGSVTCFGPE  ADQCACAHY  KDPFPCVARC
601  PSGVKPDLIS  MPIWKFPDEE  GTCQSCPINC  THSCVDLDDK  GCPAEQRASP  LTSIISAVVG
661  ILLVVVLGVV  FGILIKRRQQ  KIRKYMRRRL  LQETELVEPL  TPGAMPNQA  QMRILKETEL
721  RKVKVLGSGA  FGTVYKGIWI  PDGENVKIPV  AIKVLRENTS  PKANKEILDE  AYVMAGVGSP
781  YVSRLLGICL  TSTVQLVTQL  MPYGCLLDHV  RENRRLGSGQ  DLLNWCQIA  KGMSYLEDR
841  LVHRDLAARN  VLVKSPNHVK  ITDFGLARLL  DIDETEYHAD  GGVKPIKWA  LESILRRRFT
901  HQSDVWSYGV  TVWELMTFGA  KPYDGIPARE  IPDLLEKGER  LPQPICTID  VYIMVVKCWM
961  IDSECRPRFR  ELVSEFSRMA  RDPQRFVVIQ  NEDLGASPL  DSTFYRSLLE  DDDMGDLVDA
1021  EELVLPQGGF  FCPDPAPGTG  GMVHHRHRS  STRSGGDLT  LGLEPSEEEA  PRSPRAPSEG
1081  TGSDVFDGDL  GMAAGKLQS  LPAHDPSPLQ  RYSEDPTVPL  PSETDGYVAP  LTCSPQPEYV
1141  NQPDVRPQPP  SPQEGPLSPA  RPTGATLERP  KTLSPGKNGV  VKDVFAFGGA  VENPEYLAPR
1201  GGAAPRPHLP  PAFSPAFDNL  YYWDQDPSE  GAPSTFKGT  PTAENPEYLG  LDVPEV*

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(57) Abstract: Polynucleotides encoding rhesus monkey HER2/neu have been isolated, cloned and sequenced. The gene encoding the HER2/neu is commonly associated with the development of epithelial-derived human carcinomas. The present invention provides compositions and methods to elicit or enhance immunity to the protein product expressed by the HER2/neu tumor-associated antigen, wherein aberrant HER2/neu expression is associated with a carcinoma or its development. This invention specifically provides adenoviral vector constructs carrying rhHER2/neu and discloses their use in vaccines and pharmaceutical compositions for preventing and treating cancer.

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